

Scientists keep the incubator at 98.6 degrees. Inside sits a saucer-size clear plastic petri dish. At the bottom of the dish is what, to an untrained eye, might look like a smudge. University of Nebraska Medical Center researchers know exactly what it is: a cluster of embryonic stem cells.

Two teams of scientists there are conducting research using the stem cells, and more could follow after President Barack Obama on Monday lifted restrictions on federal funding for such work.

"They understand the value of this decision and how it could impact what they do," David Crouse, UNMC's associate vice chancellor for academic affairs, said of the scientists.

Obama's decision has stirred controversy, as opponents of embryonic stem cell research say destroying a human embryo is the same as taking a life. Some scientists, on the other hand, say such research has the potential to cure diseases.

Greg Schleppenbach of the Nebraska Catholic Conference said his group will continue to press the Nebraska Board of Regents to prevent the expansion of such research at the medical center. Schleppenbach and other opponents showed up at the board's meeting last week.

Crouse said he expects other UNMC scientists to bring forward proposals to seek federal funding. He said it's likely that UNMC researchers will apply for the funding within a year, but that he didn't know when they might receive any money.

There will be plenty of competition, said Don Ralbovsky of the National Institutes of Health, a major source of federal research funds. He said major research universities across the country will seek money.

Of grant applications deemed worthy by his organization, only 20 to 25 percent receive federal funding, he said.

Obama said he is allowing federal taxpayer dollars to fund significantly broader research on the stem cells because "medical miracles do not happen simply by accident."

Obama said that his administration would make up for what he called "lost ground."

Some researchers desire embryonic stem cells because they think they can become any other kind of cell. For example, some scientists think embryonic stem cells have the potential to create cells to repair a damaged liver.

Obama's action on Monday reverses former President George W. Bush's policy on stem cell research by undoing an Aug. 9, 2001, directive that banned federal funding for research into stem lines created after that date. His action limited the use of taxpayer money to only the 21 stem cell lines produced before his decision.

Bush said that he was defending human life because days-old embryos -- although typically from fertility clinics and already destined for destruction -- are destroyed to create the stem cell lines.

UNMC heeded the Bush restrictions, along with rules put in place by the regents and Nebraska lawmakers. State law forbids UNMC scientists from using state money or facilities to destroy human embryos for research.

At UNMC, there are two projects using the Bush-approved lines.

One involves lung disease. The other is broader, looking at the molecular makeup of the cells and how it could provide clues to researchers seeking cures to diabetes and other ailments.

Dr. Stephen Rennard, leader of the research team on lung disease, said his group is studying how stem cells reproduce. That work could help scientists find ways to repair damaged lungs.

Rennard said any new stem cell lines would have the potential to grow more easily than the cells he's working with.

Researchers nationally say the newer lines created without federal funds during the Bush ban are healthier and better suited to creating treatment for diseases.

Crouse said hundreds of those lines are available. The federal funds would be used to research such lines.

The Obama order does not address a separate legislative ban that precludes any federal money paying for the development of stem cell lines. The legislation, however, does not prevent funds for research on those lines created without federal funding.

Obama's action will have no effect on Creighton University's policy barring embryonic stem cell research using Creighton resources.

"We don't do it at Creighton and we're not going to do it," said Dr. Richard O'Brien, a professor and director of the Creighton Center for Health Policy and Ethics. O'Brien questioned the need for embryonic stem cell research when work on adult stem cells shows promising results.

Even if that promising alternative did not exist, Creighton would oppose embryonic stem cell research on ethical grounds, O'Brien said.

NU Regent Tim Clare of Lincoln, who opposed embryonic stem cell research during his 2008 campaign for office, said Monday that he hadn't reviewed the new federal policy and did not yet know what action the regents ought to take.

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